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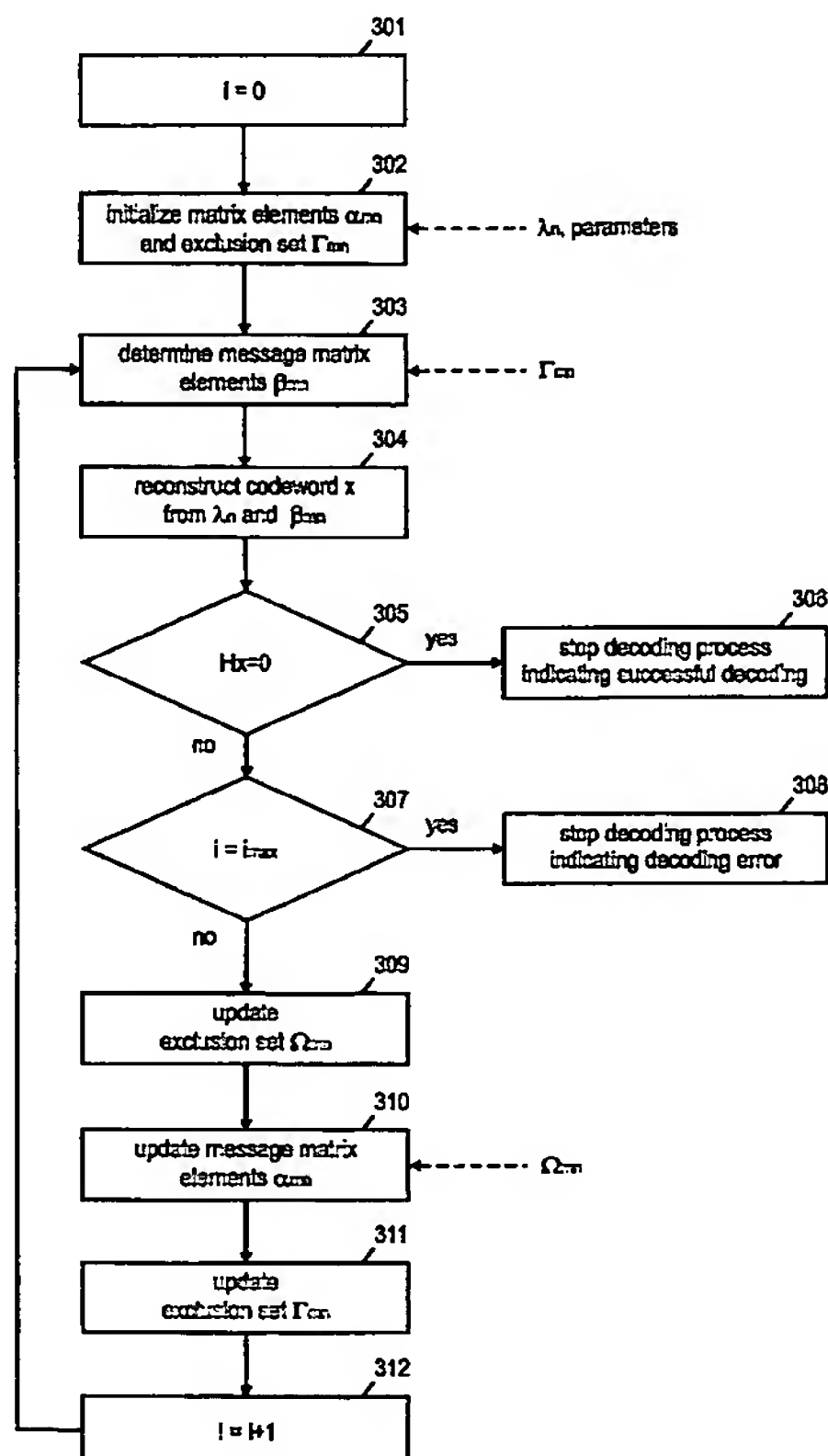
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(54) Title: BELIEF PROPAGATION DECODER CANCELLING THE EXCHANGE OF UNRELIABLE MESSAGES



(57) Abstract: The present invention relates a method and a decoder for decoding codewords, the decoding being performed as message passing on a graph representation of the code, e.g. on low density parity-check (LDPC) code, wherein for each non-zero entry in a parity check matrix, the message matrix elements of a first message matrix are initialized with data obtained from a demodulator, and the elements of a second message matrix are determined based on message matrix elements of said first message matrix. Further, a decoded codeword is reconstructed based on the data obtained from the demodulator and the matrix elements of the second matrix. Moreover the present invention relates to and to a communication system, a mobile terminal and a base station comprising the decoder. To reduce the influence of wrong information the decoding method uses subset of matrix elements from said first/second matrix for determining a matrix element of said second/first matrix, wherein the matrix elements of said subset fulfill a reliability criterion.



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